Pentagon gets defensive over missile secrets

Geoff Brumfiel, Washington

The Pentagon is planning new restrictions on the results of ballistic-missile defence tests — angering outside scientists who have until now monitored the tests and, on occasion, taken issue with the declared results.

Data from future tests involving target warheads and decoys will be classified as secret to prevent enemies from learning about the system's weaknesses, says Lieutenant Colonel Richard Lehner, a spokesman for the Missile Defense Agency. "You reach a point in a test programme where you have to start protecting the data," he says.

The Pentagon has already tested aspects of its missile defence system, including its ability to differentiate ballistic missiles from decoys, but is planning a series of further tests.

The secrecy argument holds little sway with researchers who have closely followed the development of the missile defence programme, such as Theodore Postol, professor of science, technology and international security at the Massachusetts Institute of Technology. "I think it's very clear why they're classifying information about the targets," he says. "It's because they can't tell the difference between decoys and deployed warheads."

Critics say that the Pentagon's move is an effort to deflect criticism from independent observers and Congress. They concede that the weapons system's vulnerabilities should be classified at some stage, but argue that the missile defence programme isn't close to the level of maturity to justify such classification.

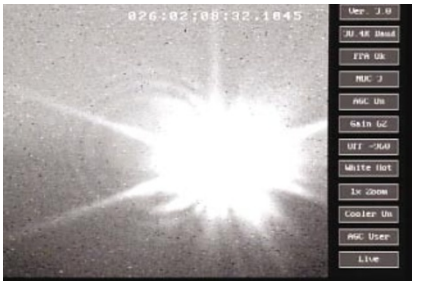
"This programme is at a much earlier stage of development," contends David Wright, a physicist at the Union of Concerned Scientists, a group based in Cambridge, Massachusetts, that has criticized the missile defence programme.

But Lehner says that the tests have reached a point of sophistication where providing details about its results will tip off potential adversaries about how the system works.

Phil Coyle, who directed the evaluation of missile defence during the Clinton administration and is now a senior adviser at the Washington-based Center for Defense Information, says that the Pentagon's move threatens to bury the whole programme in a cloud of secrecy. "If they classify their planning, the purposes of the tests and the results, it will be difficult for Congress and the public to know what's going on," he says.

Lehner says that the programme will continue to share classified test information with the appropriate congressional committees, but not with the public. "We're not in a popularity contest," he says. "We're trying to design a system that works."

On 14 June, the Bush administration pulled out of the 1972 Anti-Ballistic Missile Treaty, clearing the way for a missile defence system. The next day, construction crews broke ground on the site at Fort Greeley, Alaska, that will be home to six interceptors. The Pentagon aims to provide what it terms "limited protection" from long-distance missile attack some time between 2004 and 2008. ■



From launch pad (right, inset) to impact (above) tests on interceptor missiles will soon be secret.

MISSILE DEFENSE AGENCY

Astronomers give virtual observatory a real future

Declan Butler

The International Virtual Observatory (IVO) — an amalgamation of astronomical and astrophysical data from the world's best telescopes and detectors — is on track to start operations early next year.

Two hundred astronomers and government officials met in Garching, Germany, on 10–14 June to plan the collaboration, which would integrate the world's astronomy databases into a single seamless resource.

They agreed to create an International Virtual Observatory Alliance, comprising representatives of existing astronomy databases, to make joint decisions on the key technologies, common data and software standards to be used in the project.

The meeting's delegates were optimistic that the community may be ready to begin using prototypes of the databases by next January, says Catherine Cesarsky, director of the European Southern Observatory, which is based in Garching and operates telescopes in Chile.

The main components of the IVO are currently in development. About US$20 million has been allocated by the United States, Britain, the European Union and Canada over over the past six months to virtual observatories based on their own databases, and more projects are being planned in Australia, India, Russia and Germany. The IVO's challenge is to combine these into a single resource.

Advances in telescope design mean that new generations of γ-ray, X-ray, optical and infrared telescopes are coming online, generating data at vastly increasing rates.

Astronomical databases are doubling in size each year, points out Jeremiah Ostriker, an astrophysicist at the University of Cambridge, UK. He argues that the data can only be handled using new techniques for distributed, high-power computing.

Enthusiasm for the IVO reflects a profound shift in how astronomy works, with researchers moving from the study of specific objects through particular telescopes to the systematic surveying of entire swathes of the sky, along the lines of the Sloan Digital Sky Survey (see *Nature* 407, 557; 2000).

In this environment, astronomers say, the advantages of the IVO are manifest. The data it holds will be re-used by many research teams, for different purposes. For example, supernovae could be studied by correlating signals in astronomy databases with gravitational-wave data, as well as data from neutrino detectors in high-energy-physics databases.

The IVO will also democratize astronomy and astrophysics, adds Cesarsky, as scientists and amateur astronomers, who lack the resources to build and operate large observatories, will gain access to data from the world's best instruments and to sophisticated analysis tools. ■